

What is claimed is:

1. A method of supplying a developing solution to a surface of a substrate to perform developing treatment for the substrate, comprising:

5 a first step of supplying the developing solution to the surface of the substrate while a developing solution supply nozzle is moving relative to the substrate; and

a second step of developing the substrate for a first predetermined period of time,

10 said second step having the step of stirring the developing solution on the surface of the substrate after a second predetermined period of time from the completion of the first step.

2. A method as set forth in claim 1,
wherein said stirring step is performed by rotating the substrate.

3. A method as set forth in claim 2,
15 wherein said stirring step by rotation is performed by normally rotating the substrate and then reversely rotating the substrate.

4. A method as set forth in claim 3,
wherein the reverse rotation is performed at a speed higher than a rotation speed in the normal rotation.

20 5. A method as set forth in claim 2,
wherein the substrate is rotated so that a thickness of the developing solution after said step of stirring the developing solution is not less than a predetermined thickness.

6. A method as set forth in claim 2, further comprising the steps of:
25 measuring a thickness of the developing solution after said step of stirring the developing solution; and

changing a rotation time of the substrate based on the measurement.

7. A method as set forth in claim 2, further comprising the steps of:
measuring a thickness of the developing solution after said step of
stirring the developing solution; and

5 changing a rotation speed of the substrate based on the measurement.

8. A method as set forth in claim 2, further comprising the steps of:
measuring a thickness of the developing solution after said step of
stirring the developing solution; and

10 changing a rotation acceleration of the substrate based on the
measurement.

9. A method as set forth in claim 1,
wherein the developing solution supply nozzle supplies the developing
solution to the substrate while moving from one end to another end of the
substrate in said first step.

15 10. A method as set forth in claim 2,
wherein the developing solution supply nozzle supplies the developing
solution to the substrate while moving from one end to another end of the
substrate in said first step.

11. A method as set forth in claim 9, further comprising the step of:
20 supplying the developing solution again to the surface of the substrate
while moving the developing solution supply nozzle from the other end to the
one end of the substrate after said stirring step.

12. A method as set forth in claim 10, further comprising the step of:
supplying the developing solution again to the surface of the substrate
25 while moving the developing solution supply nozzle from the other end to the
one end of the substrate after the stirring step.

13. A method as set forth claim 1,

wherein the developing solution is supplied to the substrate while the developing solution supply nozzle is stopped above the substrate and the substrate is rotated in said first step.

5 14. A method as set forth in claim 13, further comprising the step of:

supplying the developing solution again to the substrate while the developing solution supply nozzle is stopped above the substrate and the substrate is rotated in a direction opposite to the above rotation after said stirring step.

10 15. A method as set forth in claim 1,

wherein the developing solution is supplied to the substrate while the developing solution supply nozzle is stopped or moving above the substrate with the substrate being rotated in said first step.

16. A method as set forth in claim 15, further comprising the step of:

15 supplying the developing solution again to the substrate while the developing solution supply nozzle is stopped or moving above the substrate with the substrate being rotated in a direction opposite to the above rotation after said stirring step.

17. A unit for performing developing treatment for a substrate by
20 supplying a developing solution to a surface of the substrate while moving a developing solution supply nozzle relative to the substrate, comprising:

a rotary drive member for holding and rotating the substrate; and

a rotation controller for normally and reversely rotating the rotary drive member after the supply of the developing solution.

25 18. The unit as set forth in claim 17, further comprising:

a measuring device for measuring a thickness of a film of the developing solution supplied to the surface of the substrate; and

a controller for controlling at least a rotation time or a rotation speed of the substrate based on a measurement by the measuring device.

5 19. The unit as set forth in claim 17, further comprising:

a measuring device for measuring a thickness of a film of the developing solution supplied to the surface of the substrate; and

a controller for controlling a developing time when the substrate is developed while the rotary drive member is stopped after the rotation of the
10 substrate based on a measurement by the measuring device.